

IN THE CLAIMS

1. (Original) A device for blocking an optical lens, comprising a lens holding tool to which the optical lens is to be fixed through a bonding agent, characterized by comprising:

a loading table on which the optical lens is to be placed with a concave surface thereof facing up;

a centering device which causes a geometric center of the optical lens to coincide with a center of said loading table;

a dripping device which drips the bonding agent onto the concave surface of the optical lens; and

a moving device which moves the optical lens to a block position of said lens holding tool.

2. (Original) A device for blocking an optical lens according to claim 1, characterized in that

said centering device comprises a plurality of pins which are movable in a radial direction and a circumferential direction of said loading table and press a peripheral surface of the optical lens,

each of said pins comprising a locking portion at an upper end thereof which locks a peripheral edge of the optical lens on a concave surface side.

3. (Original) A device for blocking an optical lens according to claim 1, characterized in that said centering device comprises a clamp base which surrounds said loading table, a rotary base which is rotatably built into said clamp base, a driving device which pivots said rotary base, a plurality of stationary shafts which project on said clamp base, a plurality of clamp members which are pivotally supported by said

stationary shafts, respectively, a plurality of moving shafts which project on said rotary base and extend through respective elongated holes in said clamp members and pivot said clamp members respectively toward said loading table during centering of the optical lens, and a plurality of pins which respectively project on said clamp members and press a peripheral surface of the optical lens during centering.

4. (Original) A device for blocking an optical lens according to claim 2, characterized in that

said loading table is swingably supported by support means, and
said moving device moves said loading table upward to move the
optical lens upward along said pins so as to move the optical lens to the block position.

5. (Original) A device for blocking an optical lens according to claim 1, characterized by further comprising a gap setting device which moves said lens holding tool and the optical lens in directions to relatively approach each other to set a predetermined gap therebetween, so that the bonding agent is spread.

6. (Original) A device for blocking an optical lens according to claim 5, characterized in that a dripping amount of bonding agent to be dripped by said dripping device onto the optical lens is calculated from at least one of a thickness of a peripheral edge portion of the bonding agent after spreading, a diameter of said lens holding tool, a radius of curvature of a blocking surface, a diameter of the optical lens, a radius of curvature of the concave surface, and a gap between said lens holding tool and the optical lens.

7. (Original) A device for blocking an optical lens according to claim 5, characterized in that a gap d in a vertical direction between a peripheral portion of a blocking surface of said lens holding tool and a peripheral portion of the optical lens on a concave surface side is calculated by the following equation:

$$d = \sqrt{R^2 - \frac{LDb^2}{4}} + \sqrt{R^2 - \frac{YDh^2}{4}}$$

where R is the radius of curvature of the concave surface of the optical lens, LDb is the diameter of the optical lens, and YDh is the diameter of said lens holding tool.

8. (Original) A device for blocking an optical lens according to claim 5, characterized in that a dripping amount Q of bonding agent is calculated by the following equation:

$$Q = \pi T_e Dh^2 + \pi \frac{1}{3} (R - \sqrt{R^2 - Dh^2})^3 + R(R - \sqrt{R^2 - Dh^2})^2 \\ \pi \frac{1}{3} (Ch - \sqrt{Ch^2 - Dh^2})^3 + Ch(Ch - \sqrt{Ch^2 - Dh^2})^2$$

where Te is the thickness of the peripheral portion of the bonding agent after spreading, Ch is the radius of curvature of a blocking surface of said lens holding tool, R is the radius of curvature of the concave surface of the optical lens, and 2Dh is the diameter of the bonding agent after spreading.

9. (Withdrawn) A device for blocking an optical lens according to claim 5, characterized in that a dripping amount of bonding agent is calculated by the following equation:

$$Q = \pi(T_c + \sqrt{R^2 - Dh^2} - \sqrt{Ch^2 - Dh^2})Dh^2 \\ + \pi \frac{1}{3} (R - \sqrt{R^2 - Dh^2})^3 + R(R - \sqrt{R^2 - Dh^2})^2 \\ \pi \frac{1}{3} (Ch - \sqrt{Ch^2 - Dh^2})^3 + Ch(Ch - \sqrt{Ch^2 - Dh^2})^2$$

where Tc is the thickness of a center of the bonding agent after spreading, 2Dh is the diameter of the bonding agent after spreading, Ch is the radius of curvature of a blocking surface of said lens holding tool, and R is the radius of curvature of the concave surface of the optical lens.

10. (Original) A device for blocking an optical lens according to claim 1, characterized in that said dripping device comprises a gear pump which supplies the bonding

agent, a driving device which drives said gear pump intermittently, and a dripping device which drips the bonding agent supplied by said gear pump onto the concave surface of the optical lens.

11. (Withdrawn) A method for blocking an optical lens, of interposing a molten bonding agent between the optical lens and a lens holding tool and letting the molten bonding agent to solidify so as to fix the optical lens to the lens holding tool, characterized by comprising the steps of:

dripping the bonding agent onto a concave surface of the optical lens;

urging the lens holding tool against the bonding agent on the optical lens to spread the bonding agent so as to hold the lens holding tool and the optical tool at a predetermined gap; and

cooling the bonding agent to solidify so as to integrally bond the lens holding tool and the optical lens.